



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Peter K. Craft et al.

Patent No.:

6,941,386 B2

Issued:

September 6, 2005

Ser. No:

10/706,398

Filing Date:

November 12, 2003

Examiner:

Kristina B. Honeycutt

Atty. Docket No:

ALA-007B

GAU:

2178

For:

PROTOCOL PROCESSING STACK FOR USE WITH INTELLIGENT

NETWORK INTERFACE DEVICE

September 8, 2005

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313 Certificate
SEP 1 6 2005
of Correction

Request for Certificate of Correction under 37 C.F.R. §1.322

Sir:

Enclosed are three copies of a Certificate of Correction for the above-referenced patent. Also enclosed is a copy of a Second Preliminary Amendment, which was filed January 6, 2005, and which shows the mistakes appear to have been made by the Patent Office, and so no fee is required. Please issue the enclosed Certificate of Correction.

Respectfully submitted,

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313, on September 8, 2005.

Date: 9-8-05

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UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

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PATENT NO.

: 6,941,386 B2-

APPLICATION NO.: 10/706.398

ISSUE DATE

: September 6, 2005

INVENTOR(S)

: Craft et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 14, line 66, following claim 19, include the following claims:

- 20. A method for communication by a host computer that is connectable to a network by an intelligent network interface, the method comprising:
- establishing a Transmission Control Protocol (TCP) connection by a protocol processing stack of the host computer, the TCP connection being at least in part identified by an Internet Protocol (IP) address and TCP port of the host, and an IP address and TCP port of a remote host; and
- offloading the TCP connection from the protocol processing stack to the intelligent network interface.
- 21. The method of claim 20, wherein the offloading includes communicating a state of the TCP connection to the intelligent network interface and transferring control of data transfer for the TCP connection to the intelligent network interface.
- 22. The method of claim 20, wherein the offloading includes communicating a state of the TCP connection to the intelligent network interface and transferring control of receiving data for the TCP connection to the intelligent network interface.

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This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

nventors:

Craft et al.

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PROTOCOL PROCESSING STACK FOR USE WITH INTELLIGENT

NETWORK INTERFACE DEVICE

January 6, 2005

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313

> Transmitted via Facsimile to: 703-872-9306

Second Preliminary Amendment

Sir:

Prior to consideration on the merits, please enter the following Amendment to the Claims and consider the following Remarks.

Amendment to the Claims

- 1-20 (canceled)
- 21. (previously presented) A method for communication by a host computer that is connectable to a network by an intelligent network interface, the method comprising:

establishing a Transmission Control Protocol (TCP) connection by a central processing unit (CPU) of the host, the TCP connection being at least in part identified by an Internet Protocol (IP) address and TCP port of the host, and an IP address and TCP port of a remote host; and

transferring the TCP connection to the intelligent network interface.

- 22. (previously presented) The method of claim 21, wherein the steps of establishing and transferring are performed by a protocol processing stack executing on the CPU.
- 23. (previously presented) The method of claim 21, wherein the intelligent network interface includes a specialized network interface card and a device driver that passes the TCP connection to the specialized network interface card.
- 24. (previously presented) The method of claim 23, further comprising: transferring control of the TCP connection from the specialized network interface card to the CPU.
- 25. (previously presented) The method of claim 24, further comprising: initiating, by the CPU, the transferring control of the TCP connection from the specialized network interface card to the CPU.

- 26. (previously presented) The method of claim 21, further comprising: performing, by the network interface, TCP processing on a packet corresponding to the TCP connection.
- 27. (previously presented) The method of claim 21, further comprising:

 processing, by the network interface, a packet containing data and a TCP header corresponding to the TCP connection; and storing, by the network interface, the data without the TCP header in a

destination in the host that is associated with the TCP port of the host.

28. (previously presented) A method for communication by a host computer that is connectable to a network by an intelligent network interface, the method comprising:

establishing a Transmission Control Protocol (TCP) connection by a protocol processing stack of the host computer, the TCP connection being at least in part identified by an Internet Protocol (IP) address and TCP port of the host, and an IP address and TCP port of a remote host; and

transferring the TCP connection from the protocol processing stack to the intelligent network interface.

- 29. (previously presented) The method of claim 28, wherein the intelligent network interface includes a specialized network interface device and its device driver, and the transferring includes passing state information for the TCP connection to the device driver.
- 30. (previously presented) The method of claim 28, wherein the intelligent network interface includes a specialized network interface device and its device driver, and the transferring includes passing a data structure for the TCP connection to the device driver.

- 31. (previously presented) The method of claim 28, further comprising transferring control of the TCP connection from the intelligent network interface to the protocol stack.
- 32. (previously presented) The method of claim 28, wherein the TCP connection includes state information that is variable, and further comprising transferring the state information from the intelligent network interface to the protocol stack.
- 33. (currently amended) A set of computer-executable instructions stored on a computer-readable medium, the set of instructions comprising:

a protocol processing stack including code to establish a Transmission

Control Protocol (TCP) connection for a host having a local Internet Protocol (IP)

address and a local TCP port, the TCP connection being at least in part identified by the

local IP address, the local TCP port, a remote IP address and a remote TCP port; and

a set of directions at least one command to transfer the TCP connection

from the protocol processing stack to an intelligent network interface for the host.

- 34. (currently amended) The set of instructions of claim 33, wherein the intelligent network interface includes a specialized network interface device and a device driver for the network interface device, and the directions at least one command to transfer the TCP connection includes an instruction to transfer state information of the TCP connection from the stack to the device driver.
- 35. (currently amended) The set of instructions of claim 33, wherein the intelligent network interface includes a network interface device and a device driver for the network interface device, and the <u>directions</u> at least one command to transfer the TCP connection includes an instruction to transfer a data structure including state information of the TCP connection from the stack to the device driver.

- 36. (currently amended) The set of instructions of claim 33, wherein the intelligent network interface includes a network interface device and a device driver for the network interface device, and the directions at least one command to transfer the TCP connection includes means for transferring state information of the TCP connection from the stack to the device driver.
- 37. (previously presented) The set of instructions of claim 33, further comprising an instruction to initiate transferring control of the TCP connection from the intelligent network interface to the protocol processing stack.
- 38. (previously presented) The set of instructions of claim 33, further comprising an instruction to receive state information of the TCP connection from the intelligent network interface.
- 39. (previously presented) The set of instructions of claim 33, further comprising an instruction to select whether to transfer the TCP connection to the intelligent network interface.
- 40. (new) A method for communication by a host computer that is connectable to a network by an intelligent network interface, the method comprising:

establishing a Transmission Control Protocol (TCP) connection by a protocol processing stack of the host computer, the TCP connection being at least in part identified by an Internet Protocol (IP) address and TCP port of the host, and an IP address and TCP port of a remote host; and

offloading the TCP connection from the protocol processing stack to the intelligent network interface.

41. (new) The method of claim 40, wherein the offloading includes communicating a state of the TCP connection to the intelligent network interface and transferring control of data transfer for the TCP connection to the intelligent network interface.

42. (new) The method of claim 40, wherein the offloading includes communicating a state of the TCP connection to the intelligent network interface and transferring control of receiving data for the TCP connection to the intelligent network interface.

Remarks

Applicants have amended previously presented claims 33-36, and have added new claims 40-42. Because the total number of claims is two more than the number previously paid for, and because the number of new independent claims is one more than that previously paid for, a fee of \$300 is required to enter this amendment. Applicants are transmitting herewith a Credit Card Payment Form authorizing payment of the amendment fee of \$300.00.

Applicants believe the application is in condition for allowance, and a Notice of Allowance is solicited.

Respectfully submitted,

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being transmitted via facsimile to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313, telephone number (703) 872-9306, on January 6, 2005.

Date: 1-6-03

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